

WHAT IS CLAIMED IS:

1. A printhead substrate having a plurality of printing elements, each including an electrothermal transducer, comprising:
- 5 a selection circuit which selects, in accordance with an input control signal, a printing signal input via a signal line and a predetermined signal for driving the printing elements; and
- 10 an input unit which inputs a driving signal for driving the plurality of printing elements,
- wherein in a case where printing operation by driving the plurality of printing elements in accordance with the printing signal is suppressed, said
- 15 selection circuit selects the predetermined signal, and drives the printing elements on the basis of the predetermined signal by a short pulse signal insufficient to print.
- 20 2. A printhead using a first printhead substrate having a plurality of printing elements, each including an electrothermal transducer, and wherein said first printhead substrate further comprises:
- 25 a selection circuit which selects, in accordance with an input control signal, a printing signal input via a signal line and a predetermined signal for driving the printing elements; and

an input unit which inputs a driving signal for driving the plurality of printing elements,

wherein in a case where printing operation by driving the plurality of printing elements in

5 accordance with the printing signal is suppressed, said selection circuit selects the predetermined signal, and drives the printing elements on the basis of the predetermined signal by a short pulse signal insufficient to print.

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3. The printhead according to claim 2, further comprising:

a second printhead substrate; and

at least one shared signal line between said

15 first printhead substrate and said second printhead substrate.

4. The printhead according to claim 3, wherein said first printhead substrate further comprises dedicated
20 signal lines for inputting a selection signal used for time-divisionally driving the plurality of printing elements and the control signal, and

the control signal functions as a signal for selecting the printing signal in a case where printing
25 operation is performed by driving the plurality of printing elements in accordance with the printing signal, while the control signal functions as a signal

for selecting the predetermined signal in a case where printing operation by driving the plurality of printing elements in accordance with the printing signal is suppressed.

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5. The printhead according to claim 3, wherein the shared signal line is used for time-divisionally inputting a selection signal for driving the plurality of printing elements and the control signal,

10 the control signal includes at least a 2-bit signal, and

one bit of said at least 2-bit signal is input as a dedicated control signal to said selection circuit exclusively from said second printhead substrate.

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6. The printhead according to claim 3, wherein said first printhead substrate further comprises:

a shift register which receives via the shared signal line the printing signal, a selection signal for time-divisionally driving the plurality of printing elements, and the control signal; and

a latch circuit which latches the printing signal and the control signal input to said shift register,

25 wherein said latch circuit includes said selection circuit,

the control signal includes at least a 2-bit signal, and

one bit of said at least 2-bit signal is input as a dedicated control signal to said selection circuit exclusively from said second printhead substrate.

5 7. The printhead according to claim 3, wherein printing operation is performed by alternately inputting the printing signal via the shared signal line to said first printhead substrate and said second printhead substrate.

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8. The printhead according to claim 3, wherein the printhead includes an inkjet printhead which prints by discharging ink.

15 9. The printhead according to claim 8, further comprising an ink tank which is integrated with the printhead and supplies the ink.

10. A printing apparatus for printing by discharging
20 ink onto a printing medium using a printhead according to claim 3.

11. The apparatus according to claim 10, further comprising:

25 a first ink tank which stores black ink to be used for print operation in said first printhead substrate; and

a second ink tank which stores cyan ink, magenta ink, and yellow ink to be used for print operation in said second printhead substrate.

- 5 12. The apparatus according to claim 10, wherein the printhead is exchangeable.

13. A printhead temperature control method in a case where printing is performed by exclusively driving a
10 first and second printhead substrates, of a printhead, with the same arrangement each of which has a plurality of printing elements, each including an electrothermal transducer, comprising the steps of:

inputting a printing signal to the first
15 printhead substrate via a signal line being shared with the second printhead substrate;

inputting a control signal for selecting the printing signal to the first printhead substrate incorporating a selection circuit which selects the
20 printing signal and a predetermined signal for driving all the printing elements;

inputting a driving signal for driving the plurality of printing elements of the first printhead substrate, thereby printing; and

25 inputting a control signal for selecting the predetermined signal to the second printhead substrate incorporating the selection circuit so as to drive the

printing elements of the second printhead substrate in accordance with a driving signal having a short pulse width insufficient to print.